

IN THE CLAIMS:

Claims 1-56 (canceled)

Claim 57 (currently amended): A method of manufacturing tools comprising: a first cutting tool for working a metal and being a tool selected from a first group of tools consisting of drills, roughing milling cutters, peripheral milling cutters, tools for hobbing machines, turning tools; and a second cutting tool for working a metal and being a tool selected from a second group of tools consisting of front-end milling cutters and ball-end milling cutters; the method further comprising: two different types of cutting tools, namely:

a) a first type of cutting tool for working a material with a hardness of at most 45 Rockwell (HRC) and a tensile strength of up to at most 1500N/mm²; and
b) a second type of cutting tool for working a material with a hardness of more than 45 Rockwell (HRC) and a tensile strength of more than 1500N/mm²;

the method comprising the steps of:

providing on a first region of a tool body of both types of said first and of said second cutting tools, which first region contains at least one cutting edge, a first hard material coating by means of a plasma vacuum coating process;

providing on a second region of the tool body of both types of said first and of said second cutting tools, which second region is adjacent said first region, a second hard material coating by means of said plasma vacuum coating process;

selecting as hard material for said first and for said second hard material coatings of ~~both types of~~ said first and of said second cutting tools, a material selected from the group consisting of: carbide, oxide, oxicarbide, nitride, nitrocarbide, oxinitride and nitro oxicarbide of at least two of the metal elements Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W and Al; and

selecting said first hard material coating for said first ~~type of~~ cutting tool to have a content of said at least two metal elements which is at most 2at% different from a content of said at least two metal elements in said second hard material coating, [[;]] and selecting said first hard material coating for said second ~~type of~~ cutting tool to have a content of said at least two metal elements to be different from the content of said at least two metal elements of said second hard material coating by more than 2at%.

Claim 58 (currently amended): The method of claim 57, further comprising the step of depositing at least as a part of said hard material coatings a (Ti,Al)N coating on said tool body of ~~both tool types~~ said first and of said second cutting tools.

Claim 59 (currently amended): The method of claim 58, further comprising the step of providing an intermediate layer between said tool body and said hard material coatings of ~~both tool types~~ said first and of said second cutting tools.

Claim 60 (previously presented): The method of claim 57, further comprising the step of depositing said hard material coatings by means of arc evaporation.

Claim 61 (currently amended): The method of claim 57, further comprising the step of forming said first hard material coating to have a content of said at least two metal elements that is different from said content of said at least two metal elements in said second hard material coating by at most 2at% by establishing a ratio of a bias voltage applied to said tool body of ~~both tool types~~ said first cutting tool during said coating process with respect to an electric reference potential for a plasma discharge of said plasma vacuum coating process with respect to partial pressure of a reactive gas in a process atmosphere of said plasma vacuum coating process to be:

$$1 \times 10^3 \leq U_{\text{bias}} / P_{\text{reactive}} \leq 4 \times 10^3$$

wherein ~~voltage unit is volt and pressure unit is mbar, and wherein~~ U_{bias} stands for said bias voltage in volts and P_{reactive} stands for said partial pressure in mbar.

Claim 62 (previously presented): The method of claim 61, including selecting ground potential as said electric reference potential.

Claim 63-64 (canceled)

Claim 65 (currently amended): The method of claim 57, further comprising the step of applying said first hard material coating with a content of said at least two metal elements to be different by at most 2at% with respect to said content of said at least two metal elements of said second hard material coating for said tool body ~~tool bodies~~ of the first ~~type~~ of cutting tool for cutting with a relatively larger cross-sectional area of cut at a relatively lower cutting rate; and applying said first hard material coating with a content of said at least two metal elements to be different by more than 2at% with respect to the

content of said at least two metal elements in said second hard material coating for said tool body of tool bodies for the second type of cutting tool for cutting with a relatively smaller cross-sectional area of cut at a relatively faster [[larger]] cutting rate as compared to the area and rate for said tool body of the first cutting tool.

Claim 66 (currently amended): The method of claim 57, wherein the tool body for the first ~~type of cutting tool~~ is for working quenched steels, highly alloyed steels, stainless steels or non-ferrous metals.

Claim 67 (currently amended): The method of claim 57, further comprising the step of applying said first hard material coating to have a content of said at least two metal elements to be different from said content of said at least two metal elements in said second hard material coating by at most 2at% for said tool body of tool bodies for the first type of cutting tool having the cutting edge being loaded simultaneously with different cutting speeds relative to a worked workpiece.

Claim 68 (currently amended): The method of claim 67, wherein the first ~~type of cutting tool~~ is a drill where minimum cutting speed occurs at a tip of the drill and higher cutting speed occurs at a circumference of the drill.

Claim 69 (currently amended): The method of claim 57, wherein the tool body of the second ~~type of cutting tool~~ is for a tool for hard chipping.

Claim 70 (previously presented): The method of claim 57, wherein said first and second hard material coatings comprise at least one (Ti,Al)N layer.

Claim 71 (currently amended): The method of claim 57, including selecting said first hard material coating to have a content of said at least two metal elements which is at most 1at% different from the content of said at least two metal elements in said second hard material coating[[,]] for the first ~~type~~ of cutting tool for relatively higher adhesive strength of the first hard material coating ~~than and relatively lower~~ hardness of said first hard material as compared with adhesive strength and hardness of the first hard material coating of the second cutting tool.

Claim 72 (currently amended): The method of claim 71, wherein a content of Al in the material composition of said first hard material coating varies by less than 1at% with respect to the content of said Al in said second hard material coating ~~for the first type of cutting tool for~~ relatively higher adhesive strength of the first hard material coating ~~than and relatively lower~~ hardness of said first hard material coating, and further selecting the content of aluminum Al in the material composition of said first hard material coating to be different from the content of said Al of said second hard material coating by more than 2 at % for the second ~~type of cutting tool for~~ relatively higher hardness of said first hard material coating ~~than and relatively lower~~ adhesive strength of said first hard material coating as compared to the adhesive strength and hardness for first hard material coating of the first cutting tool.

Claim 73 (new): The method of claim 57, wherein the metal to be cut with the first cutting tool has a hardness of at most 45 Rockwell (HRC) and a tensile strength of up to at most 1500N/mm² and the metal to be cut with the second cutting tool has a hardness of more than 45 Rockwell (HRC) and a tensile strength of more than 1500N/mm².